2.13 The Periodic Table: Groups and Trends: 10-minute Pack

Total Marks

AQA 8464 · Calculator allowed · about 10 minutes

Name: _____ Date: ____ / ____ / _____

Answer ALL questions. Show all your working.

1 State the group number (as printed on many Periodic Tables) containing the alkali metals and give one common property of alkali metals.

(Total for Question 1 is 2 marks)

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2 Chlorine, bromine and iodine are the first three halogens (Group 7) commonly studied at GCSE.

(a) State the type of molecule formed by halogen elements such as chlorine (Cl_2). **(1)**

(b) State the state of matter (solid, liquid or gas) of chlorine, bromine and iodine at room temperature. **(3)**

(Total for Question 2 is 4 marks)

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3 Sodium (Na) has atomic number 11 and mass number 23. Calculate the number of protons, neutrons and electrons in a neutral sodium atom.

(a) Number of protons **(1)**

.....

(b) Number of neutrons **(1)**

.....

(c) Number of electrons **(1)**

.....

(Total for Question 3 is 3 marks)

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Mark scheme · 2.13 The Periodic Table: Groups and Trends: 10-minute Pack

Question 1

group 1 **B1**

one property such as: react with water to produce hydrogen, are soft, have low melting points, or form +1 ions, oe **B1**

Answer: Group 1; they react with water to produce hydrogen (and form hydroxides).

Question 2

(a) diatomic (a molecule made of two atoms) oe **B1**

(a) Answer: Diatomic (two atoms joined together)

(b) chlorine: gas cao **B1**

(b) bromine: liquid cao **B1**

(b) iodine: solid cao **B1**

(b) Answer: Chlorine = gas, bromine = liquid, iodine = solid

Question 3

(a) 11 protons (atomic number 11) **B1**

(a) Answer: 11 protons

(b) 12 neutrons (mass number 23 minus proton number 11) **B1**

(b) Answer: 12 neutrons

(c) 11 electrons (neutral atom has same electrons as protons) **B1**

(c) Answer: 11 electrons

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